From: James R. Sissel <jsissel@KUHUB.CC.UKANS.EDU>
To: A16.A16(RM-8653,RM-8648)
Date: 7/20/95 12:15pm
Subject: Pulic allocation of frequencies

Just short and sweet. Please keep the public airwaves public.

James R. Sissel
301 W. Armour #226, Kansas City, MO 64111 home (816) 561-2038

jsissel@tyrell.net (Internet) jsissel@kuhub.cc.ukans.edu (Internet)
76450.2122@CompuServe.com (Internet)
76450,2122 (CompuServe)

From: James R. Sissel <jsissel@KUHUB.CC.UKANS.EDU>
To: A16.A16(RM-8653,RM-8648)
Date: 7/20/95 12:15pm
Subject: Pulic allocation of frequencies

Just short and sweet. Please keep the public airwaves public.

James R. Sissel
301 W. Armour #226, Kansas City, MO 64111 home (816) 561-2038

jsissel@tyrell.net (Internet) jsissel@kuhub.cc.ukans.edu (Internet)
76450.2122@CompuServe.com (Internet)
76450,2122 (CompuServe)

From: Childs, Philip (SD-MS) <PCHILDS@PO1.GI.COM>
To: 'RM-8648@fcc.gov' <RM-8648@fcc.gov>
Date: [redacted]
Subject: RM-8648

I am opposed to RM-8648.

Philip Childs

From: Daphne Walton <WALTON_D@AB.EDU>
To: A16.A16(RM-8653,RM-8648)
Date: [redacted]
Subject: Wireless NII spectrum

Dear Sir or Madam:

I don't know much about policy, but I do know that those of us who work in the nonprofit sector absolutely need this section of public spectrum.

As director of a community development agency working on an isolated ridge in North Central WEst Virginia I am acutely aware that we at the lowest section of the economic structure have the most to gain from free access to interactive telecommunications media. We also will be the last to get access. Conserving a healthy section of spectrum for public use will be crucial to our people being able to step into the next century on equal footing with the rest of society.

If you can allocate this healthy chunk of bandwidth to free access and keep it there for future use, I'll be able to try to teach my neighbors how to use the available technology and resources to make our community a better place. We might even be able to use this media to overcome cycles of dependency on public assistance. But we have to have access to do this affordable access, that is.

Sincerely,
Daphne Walton, Director
Community Association Reinforcing Education
PO Box 634
Philippi, WV 26416
(304) 457-2971 walton_d@AB.edu

From: Marian Waldman <marianw@netcom.com>
To: A16.A16(rm-8648)
Date: [redacted]
Subject: RM-8648

Before the
Federal Communications Commission
Washington D.C. 20554

In the Matter of

Petition for rulemaking to allocate	) the 5.1 - 5.35 GHz band and adopt	) RM-8648
service rules for a shared unlicensed	) personal radio network.	)

Dear Sirs,

This petition seems nothing more than an attempt by large telecommunications companies to limit free public use of the exapanded radio bandwidth. While this is in the best interests of the telecommunications monopolies, it is not in the best interests of the public.

The current situation regarding public communications limits access to those who are able to pay the rates they impose on usage. This seems intolerable in a country which guarantees freedom of speech and has the technology to offer the opportunity for such to every citizen. This is exactly the situation which the major corporations that control our country's communictaions wish to avoid.

Granting this petition would effectively eliminate unrestricted, free public access to communications. I ask that this not happen. In both the interest of freedom of speech and the prevention of further monopolizing the telecommunications industry. This country can not afford to have its communications controlled by a small handful of companies that have only to answer to themselves and are put into power by government regulation. This will stifle, not only public speech via electronic medium, but also development of new technology to make use of the bandwidth. Please make certain that the events I envision to not occur.

Thank you.

Respectfully,

Marian G. Waldman
4201 Duncan Drive
Annandale, VA 22003

From: <charles.durrett@mcmail.vanderbilt.edu>
To: A16.A16(rm-8648)
Date: [redacted]
Subject: RM-8648 Pubilc Responce

Dear Sirs and Madam

Concerning the RM-8648 proposal:

I feel that the public's best interest will be served, by not allowing further control of media distribution (information and intelligence) by the Telcom
Groups. But, by allowing "free" public use of a narrow band of frequencies (IE: as in the RM-8653 proposal).

It appears to me that these two proposals "counter" each other and that only one can be successful.
If this is so, I feel that the RM-8648 would not be as benificial.

I have worked in the data/telecom communications arena for close to 30 years, and watched as individuals and small groups add great value to the
"infrastructure" of both data- and tele- communications.

Thanks for allowing this form of responce.

Charles Durrett
Network Analyst
Vanderbilt University Medical Center
Network Group AAA0313 MCN
Nashville, Tn. 37232-2620

(615)322-0706

charles.durrett@mcmail.vanderbilt.edu

From: Jim Phillips <phillips@mmd.com>
To: 'RM-8648@fcc.gov' <RM-8648@fcc.gov>
Date: [redacted]
Subject: Pub-domain spectrum

please allocate public domain spectrum.

Thanks, Jim

From: Jack Powers <jackp@well.com>
To: A16.A16(RM-8648)
Date: [redacted]
Subject: RM-8648

I believe strongly that the public should have unmediated access to spectrum via standardized, intelligent equipment which can be easily designed to promote fair shairing of bandwidth. Please don't force us to pay a carrier for ALL our communications, the spectrum belongs to everyone.

John T. Powers, Jr.
PowerComm
Suite 297
305 Vineyard Center
Morgan Hill CA 95037

From: Howard Quarnstrom <qsystems.com@xnet.com>
To: A16.A16(RM-8648),FCCMAIL.SMTP("qsystems.com@xnet.c...
Date: [redacted]
Subject: Re: FREE.wireless

The "people" are supposed to own the airwaves, not only corporations.
Pass the proposal filed by WINForum.

Howard Quarnstrom
Chicago IL

From: Howard Quarnstrom <qsystems.com@xnet.com>
To: A16.A16(RM-8648),FCCMAIL.SMTP("qsystems.com@xnet.c...
Date: [redacted]
Subject: Re: FREE.wireless

The "people" are supposed to own the airwaves, not only corporations.
Pass the proposal filed by WINForum.

Howard Quarnstrom
Chicago IL

From: Mike Herdering <HERDERM@fhsmtp.fh.trw.com>
To: A16.A16(RM-8648)
Date: [redacted]
Subject: RM-8648 - Petition for Rulemaking to Allocate the 5.1 - 5.35 GHz Band and Adopt Service Rules for a

Dear Sirs,

Regarding RM-8648 - Petition for Rulemaking to Allocate the 5.1 - 5.35 GHz Band and Adopt Service Rules for a Shared Unlicensed Personal Radio Network

I am writing to ask that you implement RM-8653, and NOT RM-8648.

My impression is that RM-8648 would limit communications via air waves and be costly for the general public. I equate this scheme with that of the cable industry today, where the public pays exorbitant prices for basic services. I think the air waves should be free to those who pay for the hardware to use them. When the public has to pay for each use, communication will be limited.

Thank you.

Michael Herdering
2914 Ashmont Ave.
Arcadia, CA 91006-5518

From: <MScharf@aol.com>
To: A16.A16(RM-8653,RM-8648)
Date: 7/20/95 3:25pm
Subject: Comments on public access wireless spectrum

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Allocation of Spectrum in the 5 GHz Band) RM-8653
To Establish a Wireless Component of the)
National Information Infrastructure)
)
And In the Matter of)
)
Petition for Rulemaking to Allocate) RM-8648 the 5.1 - 5.35 GHz Band and Adopt)
Service Rules for a Shared Unlicensed)
Personal Radio Network)

Below are comments from others about the petitions before the committee. I have included these comments as they state, with both passion and clarity, the rationale for allocating this portion of the EM spectrum for what would truely become public access, wireless communications. It is my belief that the FCC, like any regulatory body, has two obligations, first to administer the current laws as they apply to existing players under their jursidiction. Second, and more importantly, to have a firm understanding of their area of administration, and drive the changes necessary to more competitive and adaptive environment to meet the needs of the future.

It is my strong belief that the adoption of these two petitions, will do a great deal towards the continued evolution (and revolution) in communications services and go along way to improving the competitive situation of the United States.

Although Apple Computer's Jim Lovette filed petition RM-8653 with the FCC, proposing a spectrum allocation for shared public use without testing and licensing of the users, the petition does *NOT* in any way grant special benefits to Apple - at least no moreso than it grants exactly the same benefits to every citizen, school, library, nonprofit group, local agency, commercial business, innovator and newsletter and newspaper publisher.

As I have no experience with communicating with your agency, I have placed my name and address below for reference:

Michael Scharf
3831 Magnolia
Irvine, CA 92714 e-mail: MScharf@aol.com

Consolidated analysis of petitions:
Author: Jim Warren
M-8653 - Public Spectrum for Public's Wireless Communications Infrastructure

Petition RM-8653 proposes that a small part of the huge broadcast spectrum be part of the NII. It would allocate the specified spectrum for free, public use by unlicensed individuals (using type-licensed transcievers), with hardware-imposed rules intended to assure equitable sharing of the frequencies (e.g., spread spectrum is one technology that could accomplish such a sharing). Although this wireless NII petition was filed by Apple Computer, it would be for free public use by anyone and any school, library, organization and company. It would allow - to say nothing of encourage - robust innovation and alternatives in wireless communications with a typical range of 10-30 or even 50 miles or more. Without tax expenses. Without monthly bills. End-running the local-loop

wired communications monopolies and exclusive franchises.

RM-8648 - Communication Industry Plan to Limit Spectrum to Wee-Range Use

Probably horrified at the prospect that the public might have an alternative to the government-facilitated local telecom and broadcast monopolies, the telecomm industry took over a group called WINforum, and they have filed a direct competitor to this ridiculous notion of allowing the public to have <gasp!> *free* metro-region communications channels.
Their petition, RM-8648, would - instead - re-allocate most of the same spectrum for use by in-office wireless networks, commercial wireless PBXes, etc.

From: Paul Baran in response to [a request from] Jim Warren for reasons that the FCC Commissioners or others should want to learn more about the Apple
NII Communications Commons proposal:

1. The Apple NII proposal raises the opportunity to consider a major new concept: how new technology can allow many more users to share the common radio spectrum at lower cost and regulatory burden.

2. This is a wake up call from the technical community to the FCC to draw attention to the implications of the new digital signal processing communications technology.

3. With success the amount of available spectrum space could be greatly increased to improve our ability to apply electronic communications to societal sectors not cost effective today, nor likely to be feasible with the present regulatory trajectory.

4. Public shared access by all comers without complex licensing is both technically and economically superior to the present concept of auctioning off the public spectrum to the highest bidder.

5. While the funds received from the one time auction appear to be significant, they are economically counterproductive. The high front end costs of spectrum licensing is a major disincentive to new technology risk investments in new radio technology. (Initial venture capital investments can rarely be justified if greater than a few million dollars, an amount far less than the bid price of national frequencies.) Only very large companies seeking monopoly positions can afford the front end costs of the bidding game.

6. The one time funds received by government for selling off he public's spectrum is small compared to the long term revenue potential over time. It is a public policy of selling the goose that lays the golden eggs rather than the eggs over time.

7. To ignore this new input information means continuing to keep a range of new services from becoming cost feasible.

8. We believe the new technology alternatives are so compelling that it will be just a matter of time whether it is adopted or not. When the new technology is adopted, either earlier or later, the world will look back and credit the FCC Commissioners for their vision, or view them in retrospect with the same attitude as we view the old East Germany leadership for trying to maintain the status quo.

Center for Democracy and Technology's Comments on a Public Wireless NII Band
CDT is concerned about the development of the NII Band from a public policy perspective inasmuch as it can advance First Amendment values in new interactive media, but we are also concerned about the development of new NII access services as a user. Our work is heavily dependent on affordable access to the NII in order to fulfill our public education and political advocacy mission. Unless we and our constituents around the country have affordable access to the NII, our ability to achieve our organizational goals will be severly limited.

II. A Gateway-free Component of the National Information
Infrastructure, as proposed in Apple Computer's NII Band Petition, is in the Public Interest

New interactive media, commonly know as cyberspace, has tremendous potential to stimulate improvements in the economic, cultural, educational and political life of our country. However, its progress is stymied in part because access to the NII is limited by access bottlenecks. The world of cyberspace is flourishing with new services and a

diversity of information, but gaining full participation in these services is often limited for individuals, schools, libraries, and other community and nonprofit institutions because high-bandwidth access to the NII remains expensive and scarce. In most cases, high-capacity access to the NII is available only through monopoly service providers who offer limited options at high prices. Where competitive options are available, they are often priced beyond the reach of individuals and local institutions.

An unlicensed NII Band can help elliviate this access bottleneck by creating a new competitive access option which operates without any single gatekeeper. Such a service will stimulate competition with existing access providers and offer consumers, especially schools, libraries, community institutions, and individuals, a more flexible and affordable method of connecting to the NII. The unlicensed wireless service as proposed in Apple Computer's NII Band Petition is in the public interest inasmuch as it: 1) promotes ubiquitous, affordable access to the NII for citizens all around the country, 2) increases the diversity of information sources available on the NII, and 3) forms a platform for a vibrant new public forum for political discourse at a local and national level.

A. Unlicensed, high bandwidth wireless service is an innovative approach to the still-unbroken "last mile" access bottleneck and will promote ubiquitous access to the NII

Despite all of the excitment surround developments in interactive communications media such as the Internet and commercial online services, access to these services remain limited by a dearth of high-capacity network access options and uneven geographic availability such high-speed access technologies that do exist. A new means of providing high bandwidth, "last mile" connectivity. Unlicensed wireless service as proposed by the Apple NII Band Petition is an option that should be aggressively promoted by the Commission in order to enable an alternative access path to the NII.

Experience from the rapid and unregulated development of the Internet suggests that gateway-free, packet-based transport technologies can be a fertile platform for the development of new information and communication services, and promote easy access to a large number of users. The NII Band proposal should be pursued a communications access option that will promote a true First Amendment diversity of information sources and be the basis of vibrant public forum in cyberspace.

1. Cyberspace is booming but end-user access options are limited by monopolistic pricing and regulatory delays

The last few years have seen explosive growth in the development of the new interactive media including the Internet, commercial online services, as well as smal computer bulletin board services, Freenets, and other interactive technology. Taken together, these developments hold out the promise of a true information revolution that will alter the way that our society does politics, business, education, and healthcare. However, the potential of these new technologies for our democracy, our economy, and our culture will only be realized if all Americans have easy and affordable access to the growing information infrastructure. Without the opportunity for full participation, the interactive media will not grow, and our society will suffer from continued social alienation, failures in our democratic process, and increased economic stratification.

Over the last ten years, telecommunications policy makers have been debating various statutory and regulatory policy steps that could be taken to make high bandwidth access to the NII more widespread and more affordable. Regretably, policy changes have been slow and actual advances in access options have been virtually nonexistent. Indeed, the vast majority of individuals and small institutions still are limited to access through analog telephone lines. Prices remain reasonable, but bandwidth limitations keep multimedia services beyond the reach of those tethered to the NII by POTS lines. The only bandwidth increases have come as a result of innovations in modem technology, which have push effective access speed up from 1200 bits per second to 28,800 bits per second.

High bandwidth services in the wireline infrastructure has been slow in coming because of high capital costs for full broadband upgrades, as well as slow marketing practices and regulatory delays for wideband services such as ISDN.[1] In many cases these delays arise out of legitimate questions as to the wisdom of high-cost upgrades, as well as genuine difficulties in adapting old regulatory structures to new services. However, the net result is delay in end user access to cyberspace.

2. Unlicenced wireless services such as the NII Band can break the access bottleneck

Clearly, a new approach to "last mile" bandwidth is needed. The Internet is a useful case study in successful stimulation of the development of a range of new information and communications services. By creating an alternative communicaitons platform, the Internet was able to stimulate the development of a a number of new

services and, in fact, a whole new communications medium. As developed by the Advanced Research Projects Agency and then the National Science Foundaton, the Internet as conceived as a "test bed" for the development of NII services. On a platform of packet-switching technologies, basic addressing schemes, and other technical standards, the Internet did indeed service as a seedbed for the development of numerous services such as electronic mail, the World
Wide Web, and Usenet newsgroups.

By providing an alternative path for access to the NII, the unlicensed wireless services can help elliviate the current access bottleneck that hampers participation in the NII by individuals, schools, libraries, and other small institutions.

B. Unlicensed wireless service with sufficient bandwidth will increase the diversity of information sources accessible to all Americans

Since its inception, the Commission has sought to increase the diversity of information sources available to the American public. In the case of the broadcast media, diversity enhancing policies have included the fairness doctrine, equal time rules, and children's programming rules.
These policies were necessary to assure that the scarce radio and television spectrum was used in way that reflected the broad needs of all
Americans.

The potential abundance of new interactive, digital communications media such as the Internet and commercial online services require a new approach to achieving the First Amendment diversity goal. Unlike broadcast media which are characterized by a scarcity of communications channels, new interactive media have an inherent abundance of communications opportunities which enable all users to be information providers as well as information receivers. However, the First Amendment diversity goal will only be achieved if individual users from a diversity of institutions and geographical settings have access to the NII. There is no channel scarcity in interactive media to pose the kind of diversity barriers that exist in the mass media. However, the potential abundance of interactive media will be squandered if access to the NII is limited because of access bottlenecks such as now exist to the NII from lack of high-capacity, widely available access options. Unlicensed wireless services which offer high capacity, bi-directional access withe the interference of gatekeepers can play a critical role in promoting a diversity of information sources in the growing NII.

C. Unlicensed wireless service can be the platform for a vibrant
"public forum" in cyberspace

For some time policy makers [2] have struggled with the question of how to promote affordable and widely available access to new interactive media for the nonprofit sector, including schools, libraries, and community groups. These groups often cannot afford the high cost of currently available access services, but their participation in the NII is vital both for their own institutional missions and in order to assure a lively public forum for the healthly functioning of our democracy. Policy proposals currently under consideration seeks regulatory means to provide low cost access to the NII for eligible groups in the nonprofit section. An NII
Band that provides gateway-free, no cost access to the NII could become an important part of the solution to difficult public access issues that face communications policy makers as our society comes to rely more and more on new interactive media.

III. Rules Implementing the NII Band Proposal Should Emphasize Equal
Access, Bi-directional Communications, and an Open Standards-Setting
Process

The Center for Democracy and Technology endorses the major functional specifications for the NII Band as outlined in Apple Computer's
Petition. We believe that the Commission should work to implement these goals. In these comments, we would place special emphasis on the equal access goal cited in Apple Computer's Petition and would also add an explicit requirement that NII Band services incorporate bi-directional communication for all users as a part of the basic service available to individual users.

A. Equal access, decentralized network architecture is a critical component of any NII service

CDT endorses the equal access goal set out in the Apple Petition and here notes that an equal access, open network is a critical architectural component of the NII as it develops. The architectural characteristics of the NII will

have a critical impact on the diversity of information sources available, as well as the ease of access for individuals and communities around the country.[3] The analog public switched telephone network enables 'many-to-many' communication but suffers from bandwidth constraints which limit most Americans' access to mulitmedia network services.

A true diversity of information in new interactive media will require that all Americans have access to network services that enable communications from any point to any other point, without the interference of information gatekeepers such as are found in the mass media today. As such, the network architectures available to individuals and institutions will have a determinative impact on the First Amendment free flow of information in the information age. The Commission should promote network services based on architectures that enable individuals and institutions to communicate with anyone around the country or the world, without the barriers to diversity that may be imposed by communications gatekeepers.

An open access[4] network, such as the NII Band would enable point-to-point communications around a local area, as well as easy access to global, open networks such the Internet. Therefore, in the interest in the First Amendment diversity and free flow of information, the Commission should seek policies which, to the greatest extent possible, promote open, many-to-many communications services.

B. NII Band must support bi-directional communications as a basic feature for all users

Full participation in the communication an information exchange that is the NII requires that individuals have bi-directional access to NII elements such as the Internet and other interactive media. In order to promote the full economic, cultural, educational, and political uses of interactive media, access must be bi-directional. This is not to say that every application will require fully symmetrical communcations, but such options should exist and be available to all users on demand. While it may be implicit in the Apple Petition, CDT suggests that the Commission include bi-directional communications as a basic criterion for NII Band Services.

C. Technical standards should be developed by the private sector, with opportunity for Commission review in the event that basic functional service goals are not met

CDT concurs with Apple Computer's suggestion that technical standards for NII Band services should be developed by the private sector, according to broad functional requirements set out by the Commission. We do believe, however, that the Commission should reserve the option to review standards as they are developed and implemented in the event that such standards do not meet the goals established by the Commission's decisions.

IV. Conclusion

In order to promote the development of the NII as an open access, decentralized, gatekeeper-free network of networks, the Center for
Democracy and Technologies encourages the Commission to take whatever steps are necessary to enable the implementation of NII Band services.

Respectfully Submitted,

The Center for Democracy and Technology
Daniel J. Weitzner
Deputy Director